Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

DRAFT
Title V, Operating
Permit: V-08-047
The Freeman Corporation
Winchester, KY 40392-0096
February 23, 2009
Chris Walling, Reviewer

SOURCE ID:	21-049-00004
AGENCY INTEREST:	811
ACTIVITY:	APE20080001

SOURCE DESCRIPTION:

On December 8, 2008, the source applied to the Division for a Title V Renewal Permit for the operation of a facility in Winchester, Kentucky for the manufacturing of hardwood veneer. Additional information was received on January 5, 2009. The application was complete on January 21, 2009.

The veneer manufacturing process consists of receiving and storing hardwood logs, debarking the logs, soaking the logs in water, sawing the logs to length to fit in slicing machines, slicing the wood into thin veneer strips, drying the thin veneer strips, and trimming and joining them. Drying heat is provided by boilers. Two natural gas boilers are included on the permit, but currently the only boilers used are those that burn wood waste, either from on-site or purchased from other sources.

The Division has recently required stack testing on the wood-fired boilers at the facility due to Notices of Violation regarding opacity. Stack test data incorporated into this renewal permit replaced the emission factors used initially. Stack testing is also required in this renewal permit for all wood boilers by the start of the fourth year of the permit or within five years from the previous stack test, whichever comes first.

The source has previously requested an operating limitation of 8400 hours per year in order to avoid applicability under 401 KAR 51:017, Prevention of Significant Deterioration. However, due to the installation of four dust-collection cyclones in recent years, and due to emission factors resulting from the recent stack testing, this operating limitation is no longer necessary.

In the permitting process, the Division evaluated the insignificant status of the veneer dryers. Data was discovered that is used by the North Carolina Department of Environment and Natural Resources to evaluate veneer drying for the purpose of Air Quality permitting. When conversions were made to correct for differences in the thickness of the veneer produced at the source to the thickness of veneer used in the NCDENR data, the dryers were determined to be insignificant.

COMMENTS:

APPLICABLE REGULATIONS:

401 KAR 59:015, New Indirect Heat Exchangers, applicable with respect to particulate emissions and sulfur dioxide emissions to each affected facility with a capacity of 250 MMBtu/hr or less and commenced on or after April 9, 1972.

401 KAR 60:005, Standards of Performance for New Stationary Sources, which incorporates by reference the federal regulation 40 CFR60 Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to each steam generating unit commenced after June 9, 1989 that has a maximum design heat input capacity between 10 MMBtu/hr and 100 MMBtu/hr.

401 KAR 59:010, New Process Operations, applicable to affected facilities or sources associated with a process operation which are not subject to another emission standard with respect to particulates in 401 KAR 59, commenced on or after July 2, 1975.

401 KAR 63:010, Fugitive Emissions, applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division of Air Quality.

401 KAR 61:020, Existing Process Operations, applicable to affected facilities or sources associated with a process operation which are not subject to another emission standard with respect to particulates in 401 KAR 61, commenced before July 2, 1975.

EMISSION AND OPERATING CAPS DESCRIPTION:

Emission Units 11, 12, 13, and 15, Wood-fired Boilers, constructed in 1991, 1991, the future, and 1996, respectively

Pursuant to KAR 59:015 Section 4(1)(c), particulate emissions from each stack for the wood-fired boilers shall not exceed the following based on 3 hour average:

for Emission Unit 11, 0.43 lb/MMBtu
for Emission Unit 12, 0.40 lb/MMBtu
for Emission Unit 15, 0.36 lb/MMBtu
and for the proposed Emission Unit 13, 0.33 lb/MMBtu.

Pursuant to 401 KAR 59:015 Section 4(2)(b), opacity emissions for the wood-fired boilers shall not exceed 20% except that a maximum of forty % opacity shall be permissible for not more than 6 consecutive minutes in any 60 consecutive minutes during cleaning the fire box or blowing soot.

Pursuant to 401 KAR 59:015 Section 4(2)(c), opacity emissions for the wood-fired boilers shall not exceed 20 % except for emissions during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

Pursuant to 401 KAR 59:015 Section 5(1)(c)2, sulfur dioxide emissions from each stack for the wood-fired boilers shall not exceed the following based on 24 hour average:

for Emission Unit 11, 3.01 lb/MMBtu
for Emission Unit 12, 1.91 lb/MMBtu
for Emission Unit 15, 2.17 lb/MMBtu
and for the proposed Emission Unit 13, 1.89 lb/MMBtu

Pursuant to 401 KAR 52:020 Section 26, the permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen, (not including condensed water vapor within the plume) then the opacity shall be determined by U.S. EPA Reference Method 9. If emissions are in excess of the applicable opacity limit, then an inspection shall be initiated of control equipment for any necessary repairs.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and maintain records of the amount of wood material, by ton, burned in each wood-fired boiler on a monthly basis.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and maintain records of weekly qualitative visual opacity readings for each wood-fired boiler stack, as well as the opacity readings taken by U.S. EPA Reference Method 9, if taken, and also any repairs or modifications that were made as a result of any opacity reading which exceeded the standard.

Emission Unit 09, Natural Gas-fired Indirect Heat Exchanger, constructed in 1979

Pursuant to KAR 59:015 Section 4(1)(c), particulate emissions from the stack shall not exceed 0.56 lb/MMBtu based on a 3 hour average.

Pursuant to 401 KAR 59:015 Section 4(2)(b), opacity emissions from the stack shall not exceed 20% except that a maximum of 40 % opacity shall be permissible for not more than 6 consecutive minutes in any 60 consecutive minutes during cleaning the fire box or blowing soot.

Pursuant to 401 KAR 59:015 Section 4(2)(c), opacity emissions from the stack shall not exceed 20 % except for emissions during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

Pursuant to 401 KAR 59:015 Section 5(1)(c)2., sulfur dioxide emissions from the stack shall not exceed 3.0 lb/MMBtu based on a 24 hour average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and maintain records of the amount of natural gas combusted on a monthly basis.

Emission Unit 05, Lumber Yard Boiler, constructed in 1989

Pursuant to KAR 59:015 Section 4(1)(c), particulate emissions from the stack shall not exceed 0.56 lb/MMBtu, based on 3 hour average.

Pursuant to 401 KAR 59:015 Section 4(2)(b), opacity emissions from the stack shall not exceed 20% except that a maximum of 40 % opacity shall be permissible for not more than 6 consecutive minutes in any 60 consecutive minutes during cleaning the fire box or blowing soot.

Pursuant to 401 KAR 59:015 Section 4(2)(c), opacity emissions from the stack shall not exceed 20 % except for emissions during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

Pursuant to 401 KAR 59:015 Section 5(1)(c)2., sulfur dioxide emissions from the stack shall not exceed 2.29 lb/MMBtu based on a 24 – hour average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor the percent sulfur in each shipment of distillate fuel oil received, based on the certification from the fuel supplier, and use that parameter to determine compliance with the sulfur dioxide emission limit.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and record the amount of fuel combusted on a monthly basis.

Pursuant to 401 KAR 52:020 Section 26, when burning distillate fuel oil in Emission Unit 05, the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emission from the stack are seen, (not including condensed water vapor within the plume) then the opacity shall be determined by U.S. EPA Reference Method 9. If emissions are in excess of the applicable opacity limit, then an inspection shall be initiated for any necessary repairs.

Emission Unit 37, Joiner / Gluer, constructed in 2001

Pursuant to 401KAR 59:010 Section 3(2), particulate emissions from the stack shall not exceed $[3.59\ (P)^{0.62}]$ lbs / hour based on a 3 hour average, where P is the processing rate in tons / hour of wood input.

Pursuant to 401 KAR 59:010 Section 3(1)(a), continuous emissions from the stack shall not exceed 20% opacity based on a 6 minute average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and record the veneer production rate and hours of operation for Emission Unit 37 on a monthly basis.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and record the amount and type of adhesive substances used for Emission Unit 37 on a monthly basis.

Emission Unit 48, Nicholson Chipper, constructed in 1988

Pursuant to 401KAR 59:010 Section 3(2), particulate emissions from the stack shall not exceed $[3.59\ (P)^{0.62}]$ lbs / hour based on a 3 hour average, where P is the processing rate in tons / hour of wood input to the machines.

Pursuant to 401 KAR 59:010 Section 3(1)(a), any continuous emissions from the stack shall not exceed 20% opacity based on a 6 minute average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and record the veneer clippings production rate and hours of operation on a monthly basis.

Emission Unit 10, Haul Roads and Log Yard and Emission Unit 42, Chip Unloading

Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the following:

a. Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;

b. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;

c. The maintenance of paved roads in a clean condition; and

d. The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

Emission Units 44, 34, 21, 22, 23, 23, 25a, 25b, and 26, Units Which Contribute to Cyclone 1: Units constructed in 2006, 1995, 2008, 1986, 1967, 1979, 2004, 2000, and 2000, respectively

Pursuant to 401 KAR 59:010, Section 3(1)(a), emissions from the cyclone stack shall not exceed 20% opacity.

Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions from the cyclone stack shall not exceed 11.56 lb / hr based on 3 hour average.

Pursuant to 401 KAR 61:020, Section 3(1)(a), emissions from the stack for emission unit 23 shall not exceed 40% opacity.

Pursuant to 401 KAR 61:020 Section 3(2), particulate emissions from the stack for emission unit 23 shall not exceed 2.20 lb / hr based on a 3 hour average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and maintain records of the amount of veneer processed on a monthly basis.

Emission Units 45, 14a, 14b, 18, 19, and 20, Units Which Contribute to Cyclone 1: Units constructed in 2008, 2006, 1990, 1967, 1991, and 1991, respectively

Pursuant to 401 KAR 59:010, Section 3(1)(a), emissions from the stack shall not exceed 20% opacity.

Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions from the stack shall not exceed 17.21 lb / hr based on a 3 hour average.

Pursuant to 401 KAR 61:020, Section 3(1)(a), emissions from Emission Unit 18 shall not exceed 40% opacity.

Pursuant to 401 KAR 61:020 Section 3(2), particulate emissions from Emission Unit 18 shall not exceed 6.28 lb / hr based on a 3 hour average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and maintain records of the amount of lumber processed on a monthly basis.

Emission Units 46, 32, and 47, Units Which Contribute to Cyclone 3, constructed in 2006, 1991, and 2006, respectively

Pursuant to 401 KAR 59:010, Section 3(1)(a), emissions from the stack shall not exceed 20% opacity.

Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions from the stack shall not exceed 17.63 lb / hr based on a 3 hour average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and maintain records of the amount of lumber processed on a monthly basis.

Emission Units 07 and 08, Units Which Contribute to Cyclone, constructed in 2006 and 1979 respectively

Pursuant to 401 KAR 59:010, Section 3(1)(a), emissions from the stack of emission unit 08 shall not exceed 20% opacity.

Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions from the stack of emission unit 08 shall not exceed 1.71 lb / hr based on a 3 hour average.

Pursuant to 401 KAR 52:020 Section 26, the permittee shall monitor and maintain records of the amount of lumber processed on a monthly basis.

PERIODIC MONITORING:

None

OPERATIONAL FLEXIBILITY:

N/A

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.